OLC 10
OLCT 10

User Manual

Analog
Gas Detector

Part Number : NPO10GB
Revision : G.1

OLDHAM

The Fixed Gas Detection Experts

GAS DETECTION

We are delighted that you have chosen an **OLDHAM** instrument and would like to thank you for your choice.

We have taken all the necessary measures to ensure that your instrument provides total satisfaction.

Now it is important to read this document carefully.

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* **READ THIS MANUAL CAREFULLY BEFORE FIRST USE OF THE EQUIPMENT:** this manual must be read by any person who is or will be responsible for using, maintaining or repairing this equipment.

*** This equipment will only provide the announced performance levels if it is used, maintained and repaired according to OLDHAM directives, by OLDHAM personnel or by personnel approved by OLDHAM.**

GUARANTEE

2 years guarantee in normal conditions of use on parts and technical labour, return in our workshops, excluding consumables (sensors, filters, etc.).

TABLE OF CONTENTS

I. PRESENTATION OF DIFFERENT VERSIONS 7

Different versions available 7

II. MECHANICAL INSTALLATION OF DIFFERENT VERSIONS, DIMENSIONS AND MOUNTING 7

III. ELECTRICAL INSTALLATION OF DIFFERENT VERSIONS 9

1. Connection of OLC 10, OLCT 10 EXPLO or OLCT 10 SC (Semi-Conductor) to a controller for combustible gas detection: 9
2. Connection of two OLC 10 TWIN to a controller 10
3. Connection of two OLCT 10 TOX (maximum 5) to a controller for detection of the same toxic gas 11
4. Connection of two OLCT 10 TOX networks (5 detectors max. per network) for detection of two different toxic gases or monitoring of two conjoined areas to a two-channel controller 12

IV. MAINTENANCE 13

1. Periodic maintenance with an OLC 10 detector (comb. gas) 13
2. Periodic maintenance with an OLC 10 TWIN transmitter (comb. gas) 13
3. Periodic maintenance with an OLCT 10 transmitter (comb. or toxic gas) 13
4. Periodic maintenance with several OLCT 10 transmitters for toxic gas 15
5. Sensor replacement 15
6. Scrapping 15

V. TECHNICAL SPECIFICATIONS 17

1. TECHNICAL SPECIFICATIONS - OLC 10 / OLC 10 Twin 17
2. TECHNICAL SPECIFICATIONS - OLCT 10 Explo Transmitter 18
3. TECHNICAL SPECIFICATIONS - OLCT 10 CO Transmitter 19
4. TECHNICAL SPECIFICATIONS - OLCT 10 SC Transmitter 20
5. TECHNICAL SPECIFICATIONS - OLCT 10 NO Transmitter 21
6. TECHNICAL SPECIFICATIONS - OLCT 10 NO2 Transmitter 22

VI. DETAIL SPECIFICATIONS FOR USE IN EXPLOSIVE ATMOSPHERES IN ACCORDANCE WITH THE ATEX 94/9/CE EUROPEAN DIRECTIVE 23

1. Specifications for installation in ATEX Zone 2G 23
2. Metrological specifications for OLC 10 combustible gas detector 23
   - 2.1. *Special precautions* 23
   - 2.2. *Reactions to other combustible gases* 23
3. MARKING 24
   - 3.1. *Version OLC 10 / OLC 10 Twin* 24
   - 3.2. *Version OLCT 10* 24

VII. DECLARATIONS OF CONFORMITY 25

I. PRESENTATION OF DIFFERENT VERSIONS

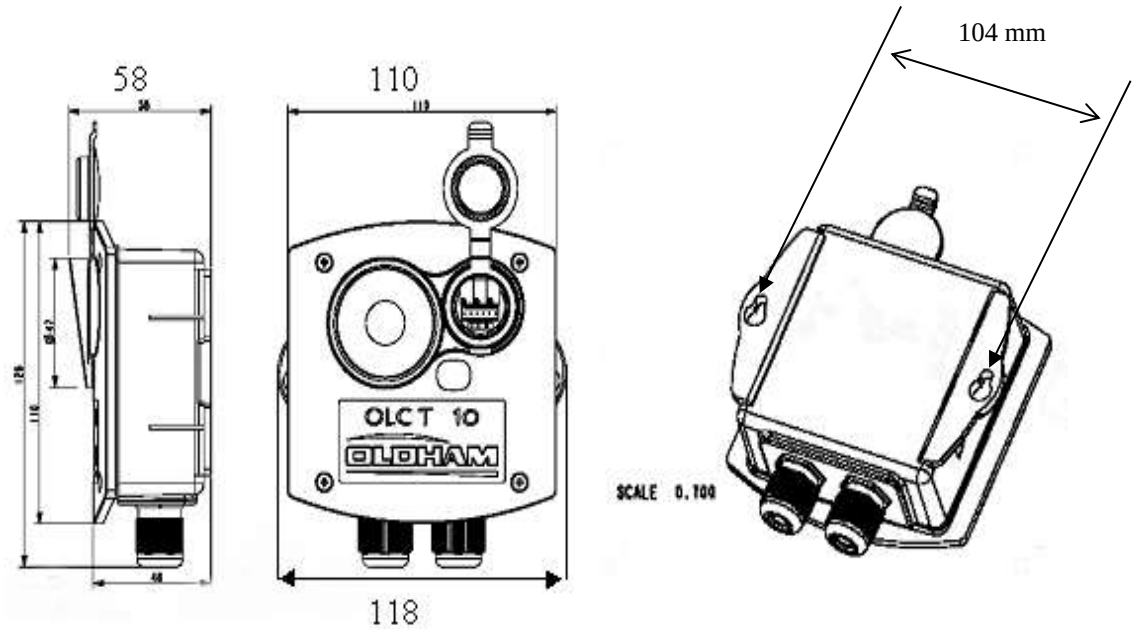
The **OLC 10, OLC 10 TWIN** and **OLCT 10 EXPLO** combustible gas detectors are detectors fitted with catalytic sensors and intended for use in boiler rooms and parking lots.

The **OLCT 10 TOX** gas detectors are 4-20mA transmitters equipped with electrochemical sensors and especially designed to detect toxic gases in commercial and light industrial applications (parking lots, boiler room, etc).

Different versions available

- OLC 10: combustible gas
- OLC 10 TWIN: combustible gas
- OLCT 10 EXPLO: combustible gas (transmitter version, 4-20 mA output)
- OLCT 10 TOX: toxic gas (transmitter version, 4-20 mA output)

II. MECHANICAL INSTALLATION OF DIFFERENT VERSIONS, DIMENSIONS AND MOUNTING



The OLC/OLCT 10 gas detectors-transmitters are mounted vertically with the cable entries positioned downwards.

Drill two holes **104 mm** apart on the base to mount the units.

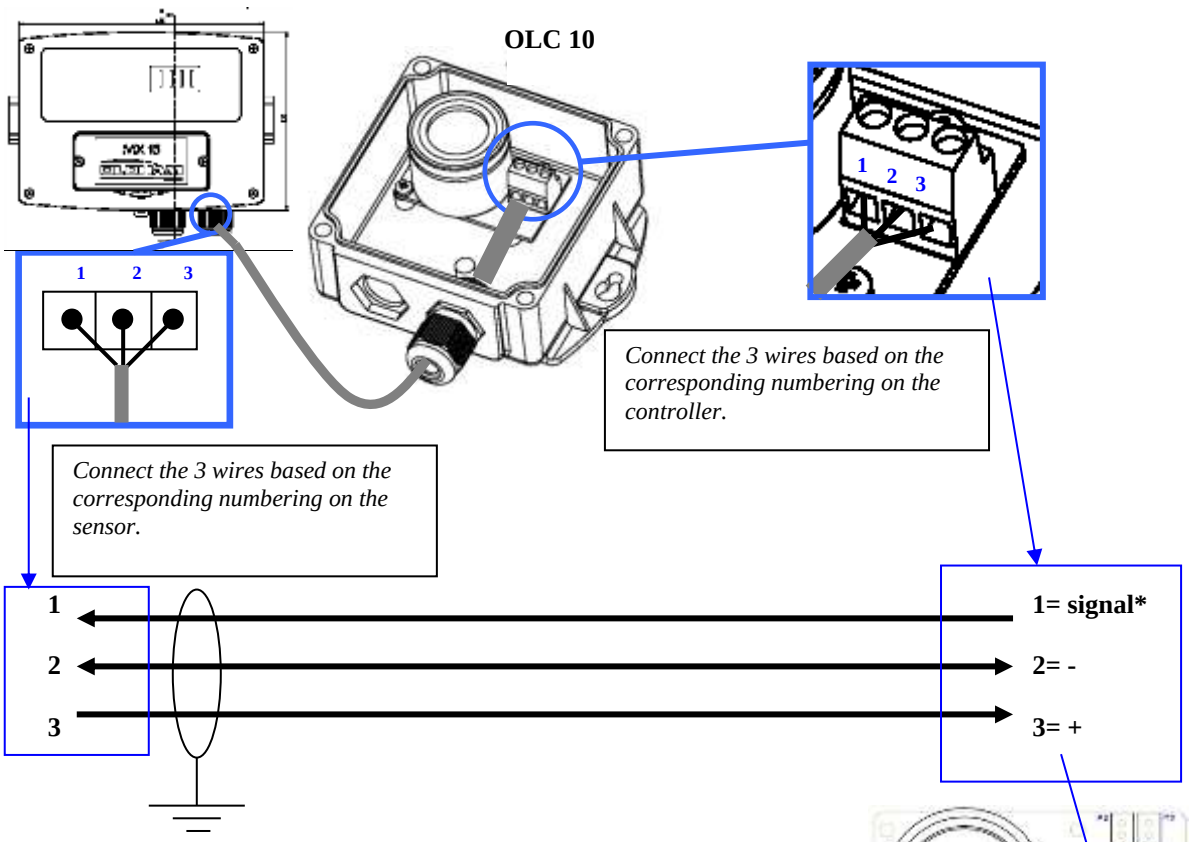
III. ELECTRICAL INSTALLATION OF DIFFERENT VERSIONS

1. Connection of OLC 10, OLCT 10 EXPLO or OLCT 10 SC (Semi-Conductor) to a controller for combustible gas detection:

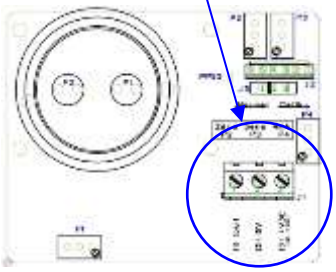
Notes:

- **The controller configuration will be different based upon the use of an OLC 10 or OLCT 10**
- **Cable to be used: 3 conductors, 3x1 mm² LiYCY type**

e.g., CONTROLLER MX 15



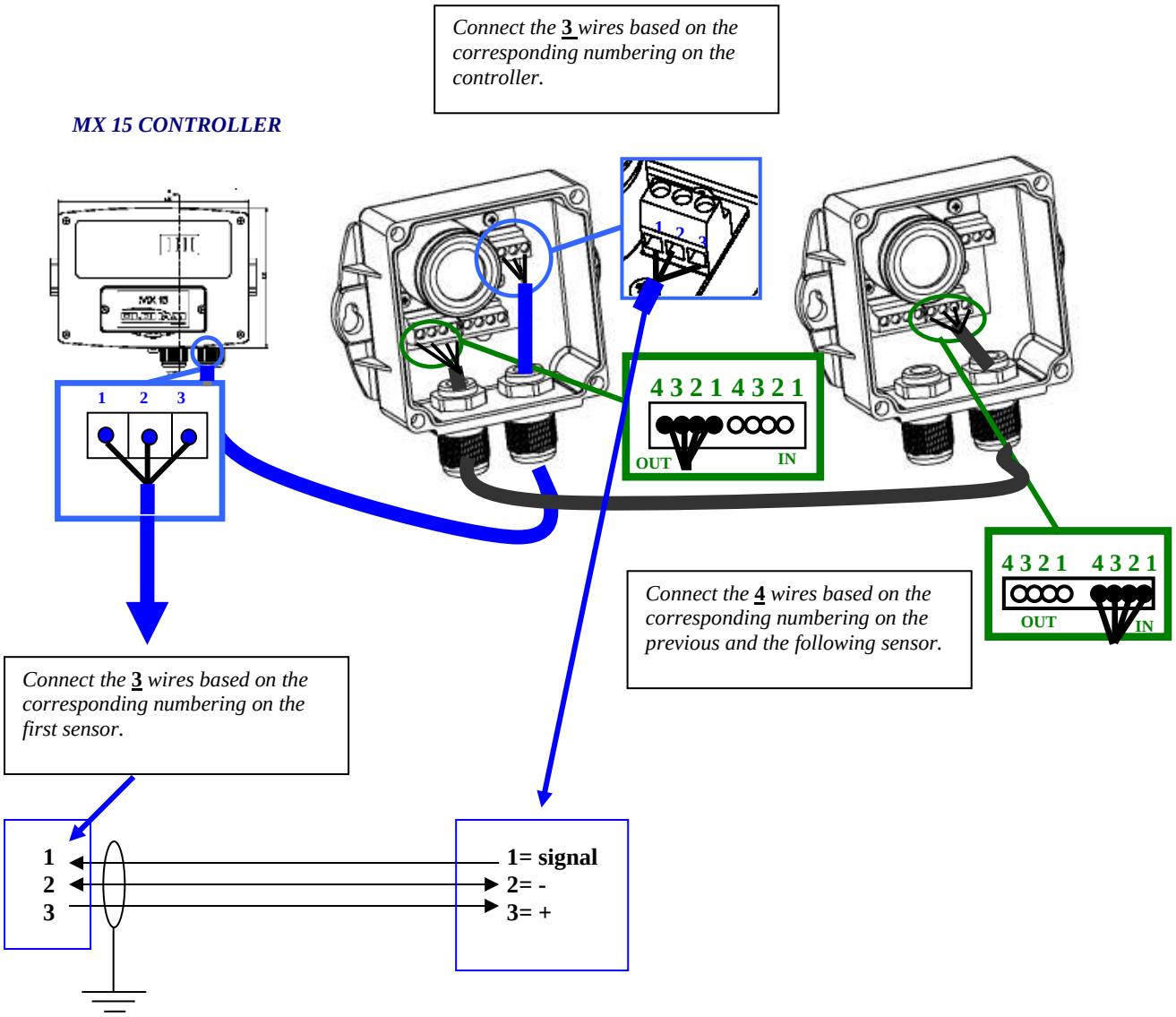
OLCT 10 EXPLO



***analog signal 4-20 mA (I out) on OLCT 10.**

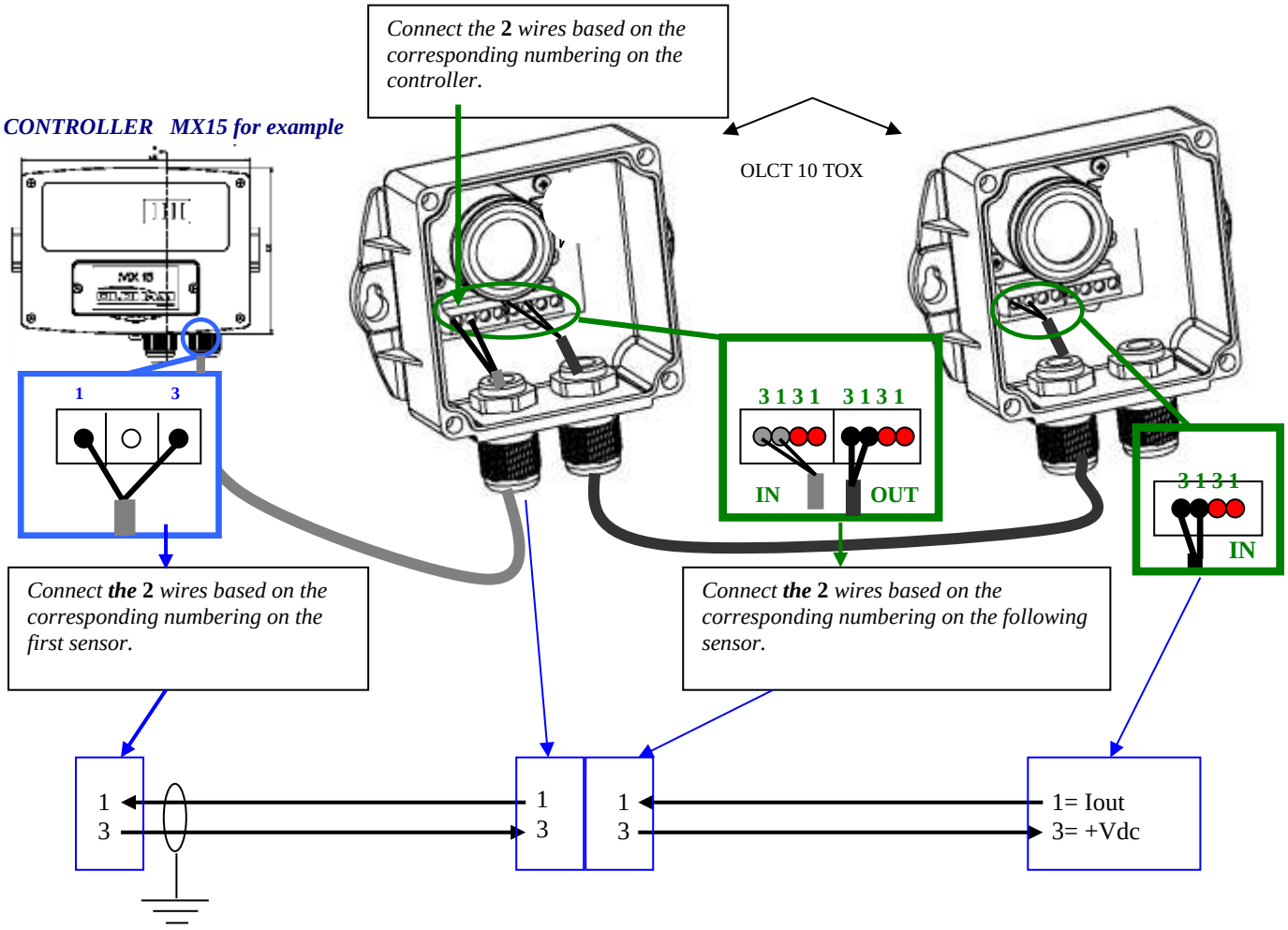
2. Connection of two OLC 10 TWIN to a controller

Cable to be used: 3 <u>and</u> 4 core cable, 3x1 mm² and 4x1 mm² LiYCY type


Connect the 3 wires based on the corresponding numbering on the controller.
MX 15 CONTROLLER
1 2 3
4 3 2 1 4 3 2 1
OUT
IN
4 3 2 1 4 3 2 1
OUT
IN
Connect the 4 wires based on the corresponding numbering on the previous and the following sensor.
Connect the 3 wires based on the corresponding numbering on the first sensor.
1
2
3
1= signal
2= -
3= +

3. Connection of two OLCT 10 TOX (maximum 5) to a controller for detection of the same toxic gas

Cable to be used: One pair (0.75 mm²) screened cable



Note: the free terminals ● allow the connection of another network of OLCT 10 TOX.

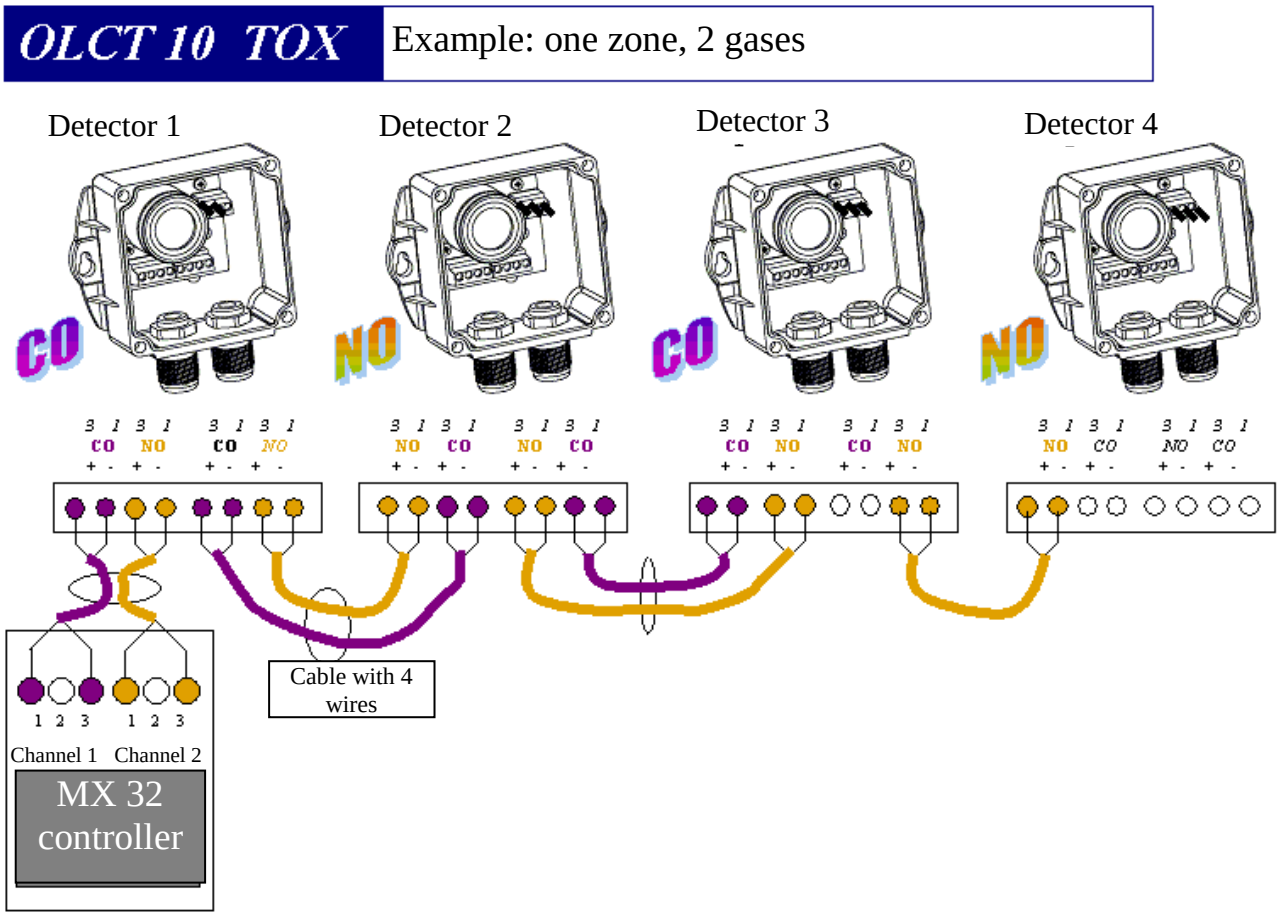
COMMENTS:

- the number of OLCT 10 toxic gas detectors shall be configured on the controller,
- the signal read by the controller is the average of the "n" detectors. As a result, a signal fault may not be detected.

In the event that 2 networks are used, it is cost-effective to use a single cable (2 pairs) subject to compliance with wiring as follows:

4. Connection of two OLCT 10 TOX networks (5 detectors max. per network) for detection of two different toxic gases or monitoring of two conjoined areas to a two-channel controller

Cable to be used: Two pairscreened cable (0.75 mm²)



Controller with 2 channels at minimum

Information for this example:

- channel 1 is a channel connected to two sensors for detection of CO
- channel 2 is a channel connected to two sensors for detection of NO
- detector 1 (CO) also acts as junction box for detector 2 (NO)
- detector 2 (NO) also acts as junction box for detector 3 (CO)
- detector 3 (CO) also acts as junction box for detector 4 (NO)

IV. MAINTENANCE

Caution: The actions described in this paragraph are intended for authorized and trained individuals who are likely to question the detection safety.

Gas detection instruments are potential life-saving devices. Recognizing this fact, OLDHAM recommends that a functional "bump" test be performed on every fixed gas-monitoring instrument as part of a regular maintenance program. A functional test is defined as a brief exposure of the detector to a concentration of gas(es) in excess of the lowest alarm set-point for each sensor for the purpose of verifying sensor and alarm operation and is not intended to be a measure of the accuracy of the instrument.

Bump test frequency depends on application, field conditions, exposure to gas, sensor technology, and environmental conditions. For new installations it may be prudent to carry out bump tests frequently at first, increasing the time intervals as confidence grows with experience in the installation concerned, on the basis of the maintenance record. The maintenance test interval should not be more than 3 months.

If an instrument fails to operate properly during any functional "bump" test, a full instrument calibration should be performed successfully prior to use. Calibration frequency will be based on bump tests results. However it cannot be more than 12 months.

These recommendations are based on safe work procedures, industry best practises, and regulatory standards to ensure worker safety. OLDHAM is not responsible for setting safety practices and policies.

1. Periodic maintenance with an OLC 10 detector (comb. gas)

- The "maintenance" position was selected on the controller in order to disable its relays (see manual of relevant product)

Reminder: make sure the detector is in clean air - otherwise inject zero air on the detector (with calibration kit) with a flow rate of 60 l/h, then wait for the stabilisation of measurement

- Perform the zero setting of the controller (see manual of relevant product)
- Now inject the calibration gas (flow rate 60l/h) into the OLC 10 sensor and wait for signal stabilisation on the controller display
- If necessary, calibrate the sensitivity using the "**S**" potentiometer of the controller (see manual of relevant product)
- Upon completion of calibration: wait for the "return to zero" on the controller display
- Return to the "normal" mode of the controller (see manual of relevant product)

2. Periodic maintenance with an OLC 10 TWIN transmitter (comb. gas)

- The procedure is almost identical to point 1 (OLC 10), with the exception of sensitivity adjustment which is performed on the OLC 10 TWIN detector that is less sensitive.

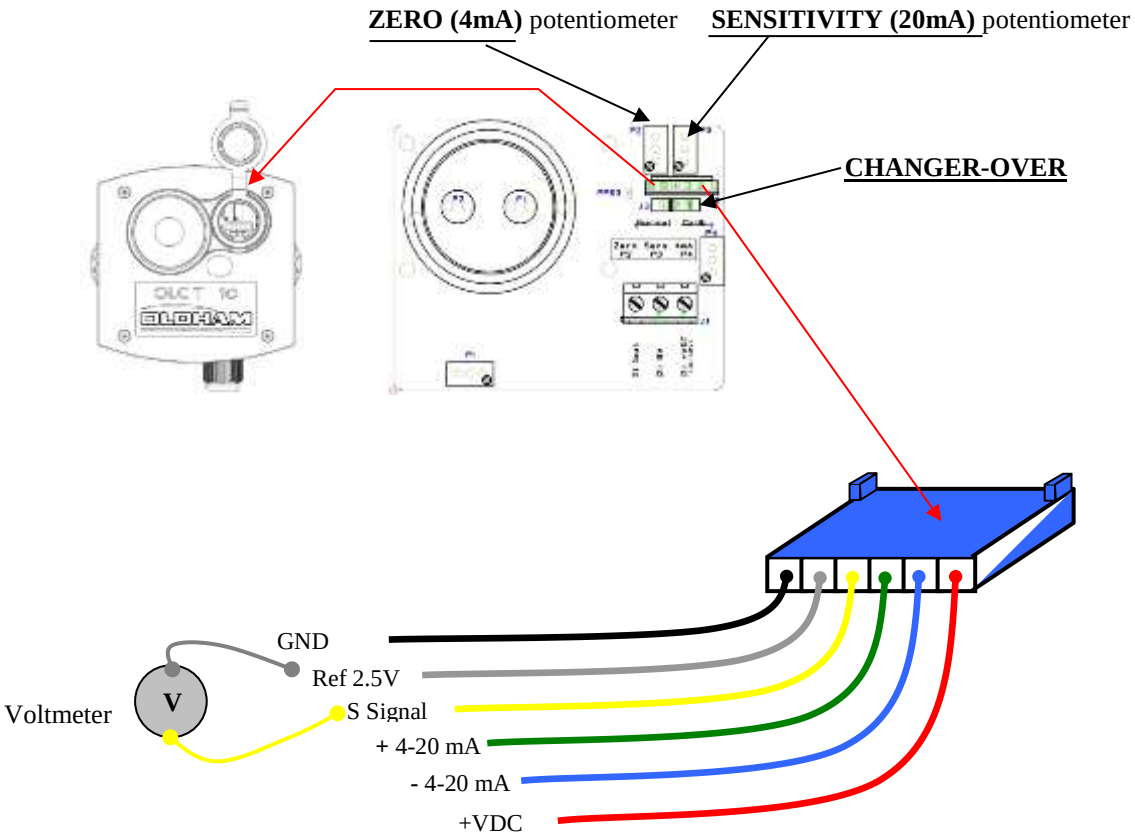
- To determine the least sensitive detector, inject gas on the two detectors, one after the other (wait for the signal to read zero). The detector that gives the lowest measurement is the less sensitive.

3. Periodic maintenance with an OLCT 10 transmitter (comb. or toxic gas)

- It is required that the kit provided by OLDHAM be used (P/N 6147872)

- Remove the end-cap that provides access to settings, located on the right side of the sensor

- Connect this kit on the male plug of the circuit, as indicated below:



MAINTENANCE CONNECTOR WIRES:

- +VDC/red = + power supply
- - 4-20 mA/blue = - of voltage, image of 4-20mA
- + 4-20 mA/green = + of voltage, image of 4-20mA

} Read on the voltmeter 400mV for 4mA and 2000mV for 20mA

- S Signal /yellow = signal from 0mV to 1600mV for zero and sensitivity setting
- Ref 2.5 V/gray = zero reference for reading of signal from 0mV to 1600mV

} **voltmeter**

- GND/black = electronic circuit ground.

- Toggle the changer-over (under the connector) on «CAL» position (to the right)

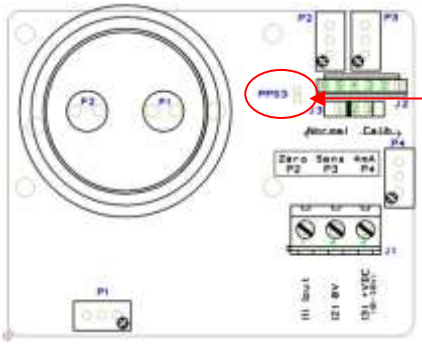
Caution: **after 9 minutes the transmitter automatically returns to normal operation! (only version OLCT 10 explo)**

Reminder: make sure the detector is in clean air - otherwise inject zero air or nitrogen on the sensor at a flow rate of 60 l/h – and wait for the stabilisation of the measurement given by the voltmeter.

- Set the **ZERO** using the zero potentiometer to read **0 mV** on the voltmeter
- Now inject the calibration gas (60l/h), wait for the signal stabilisation on the voltmeter
- If required, set the sensitivity using the "**S**" potentiometer to read **1,600mV** for the **full scale** (corresponding to **20mA**)
- Note: if you use a gas concentration lower than 100% of the scale, calculate (rule of three) and adjust to obtain the corresponding value (from 0 to 1600 mV)
- Stop calibration gas injection (remove the calibration cup)
- Wait for the "return to zero" on the voltmeter
- Again toggle the changer-over to the normal position (to the left)

Notes regarding the OLCT 10 version for combustible gases:

- the transmitter controls an "**ambiguity resolution**" function: if the sensor detects a gas concentration over 100% LEL (20 mA), it will be locked on a signal of 23.2 mA acknowledgeable through power supply shut-off or toggling of maintenance switch. The ambiguity resolution may be automatically acknowledged if the PPS3 points are short-circuited.



- Upon switching on, the output signal is set to 2mA during the 60-second stabilisation time.

4. Periodic maintenance with several OLCT 10 transmitters for toxic gas

Use the procedure described in the previous paragraph. However:

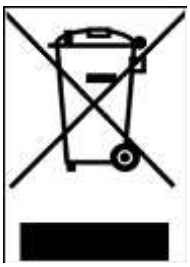
- Start with the last transmitter in the loop in relation to the controller
- Calibrate each transmitter in the loop and end with the first

5. Sensor replacement

Sensor has to be replaced as a result of impracticable calibration or as a preventive measure.
Perform a new calibration after a sensor replacement.

6. Scrapping

Concerning the conservation, of the protection and the improvement of the quality of the environment, as well as for the protection of the health of the persons and the careful and rational use of natural resources, OLCT 10 has to be the object of a selective collection for the electronic equipment and cannot be scrapped with the normal domestic waste. The user thus has the obligation to separate the OLCT 10 of the other waste so as to guarantee that it is recycled in a sure way at the environmental level. For more details of the existing sites of collection, contact the local administration or the distributor of this product.



V. TECHNICAL SPECIFICATIONS

1. TECHNICAL SPECIFICATIONS - OLC 10 / OLC 10 Twin

Combustible gas detector

Detection principle:	Catalytic
Range:	0-100% LEL methane, propane or butane.
Output signal:	Wheatstone bridge circuit
Power supply:	Current through Oldham MX controllers
Connections:	OLC 10 Version: - 3-wire terminal block, maximum distance 300 m in 1.5 mm² with MX 15 controller - 1 cable gland M16: cable diameter 4 to 8 mm OLC 10 Twin Version (two sensors on channel input MX 15) - 1 3-wire terminal block to the controller - 1 4-wire terminal block to the second sensor - maximum total distance 300 m in 1.5 mm² with MX 15 controller - 2 cable glands M16: cable diameter 4 to 8 mm
Dimensions:	Width 118 mm, Height 157 mm, Depth 60 mm
Material:	Plastic
Protection:	IP66
Storage:	6 months safe from air 0°C<T<20°C +10%<RH<60%
Estimated lifetime:	> 36 months
Temperature range:	-10°C to + 45°C
Humidity range:	0% RH to 95% RH
Pressure range:	1 bar ± 20%
Linearity deviation:	from 0 and 70% LEL: ≤ 1% LEL CH4 from 70 and 100% LEL: ≤ 7% LEL CH4
Long-term drift under normal operating conditions:	Zero < 10% LEL/year Sensitivity < 20 % of the measured value/year
Humidity impact: (10 to 90% RH) at 40°C	± 5 % of relative sensitivity
Response time:	T50 <10 sec, T90<20 sec
Certification:	Electromagnetic Compatibility EN 50270 Explosive Atmospheres: II 3 G / Ex nA IIC T6

2. TECHNICAL SPECIFICATIONS - OLCT 10 Explo Transmitter

Combustible gas transmitter

Detection principle:	Catalytic
Range:	0-100% LEL methane, propane or butane.
Signal output:	4 – 20 mA, default ≤ 0.5 mA or ≥ 23.2 mA
Ambiguity resolution:	signal sets at 23.2 mA if measurement ≥ 100% LEL Acquit by power cycling the transmitter Ambiguity resolution may be deleted through point of programming
Settings:	Local through Zero and Sensitivity potentiometers Position Maintenance 2 mA 6-pin connector for gas measuring and current image (100-ohm shunt)
Power supply:	15 to 30 V dc
Consumption:	maximum 100 mA
Cable length:	according to the controller
Load resistance:	300 ohms
Connection:	3-wire terminal block, 2 wires for power supply, 1 wire for signal 1 cable gland M16: cable diameter 4 to 8 mm
Dimensions:	Width 118 mm, Height 157 mm, Depth 60 mm
Material:	Plastic
Protection:	IP66
Storage:	0°C<T<30°C
Estimated lifetime:	> 36 months
Temperature range:	-10 to + 4°C
Humidity range:	0% RH to 95% RH
Pressure range:	1 bar ± 20%
Linearity deviation:	from 0 and 70% LEL: ≤ 1% LEL CH4 from 70 and 100% LEL: ≤ 7% LEL CH4
Temperature drift: (-10°C + 40°C)	< ± 5% LEL Methane or < 20% of indication
Long-term drift under normal operating conditions:	Zero point < 10% LEL methane Sensitivity < 20% of measured value/year
Humidity impact: (10 to 90% RH) at 40°C	± 5% of relative sensitivity
Response time:	T50 <10 sec, T90<20 sec
Certification:	Electromagnetic Compatibility EN 50270 Explosive Atmospheres: II 3 G / Ex nA IIC T4

3. TECHNICAL SPECIFICATIONS - OLCT 10 CO Transmitter

Detection principle:	Electrochemical sensor
Range:	0-300 ppm CO
Signal output:	4 – 20 mA
Settings:	Local through Zero and Sensitivity potentiometers Position Maintenance 2 mA 6-pin connector for gas measuring and current image (100-ohm shunt)
Power supply:	15 to 30 VDC
Consumption:	maximum 30 mA
Cable length:	according to the controller
Connection:	1 terminal block with 2 input wires, 1 terminal block with 2 output wires If cable with a gas signal pair: 1 terminal block with 2 input wires with copy on 1 terminal with 2 wires 2 cable gland M16: cable diameter 4 to 8 mm
Dimensions:	Width 118 mm, Height 157 mm, Depth 60 mm
Material:	Plastic
Protection:	IP66
Storage:	6 months safe from air 0°C<T<20°C +10%<RH<60%
Estimated lifetime:	> 24 months
Temperature range:	-10 to + 45°C
Humidity range:	15% RH to 90% RH
Pressure range:	1 bar ± 20%
Linearity deviation:	0 - 100 ppm ± 3 ppm 100 – 1,000 ppm ± 4% relative
Temperature drift: (-10°C + 40°C)	< ± 5 ppm or < 5 % of the indication
Long-term drift under normal operating conditions:	Sensitivity: < 10% of measured value/year
Response time:	T50 <15 sec, T90<30 sec
Certification:	Electromagnetic Compatibility EN 50270 Explosive Atmospheres: II 3 G / Ex nA IIC T4

4. TECHNICAL SPECIFICATIONS - OLCT 10 SC Transmitter

Detection principle:	semi-conductor sensor
Range:	0-2000 ppm R134A, R22
Signal output:	4 – 20 mA
Settings:	Local through Zero and Sensitivity potentiometers Position Maintenance 2 mA 4-pin connector for gas measuring and current image (100-ohm shunt)
Power supply:	15 to 30 VDC
Consumption:	maximum 100 mA
Cable length:	according to the controller
Connection:	3-wire terminal block, 2 wires for power supply, 1 wire for signal 1 cable gland M16: cable diameter 4 to 8 mm
Dimensions:	Width 118 mm, Height 157 mm, Depth 60 mm
Material:	Plastic
Protection:	IP66
Storage:	6 months safe from air 0°C<T<30°C
Estimated lifetime:	> 24 months
Temperature range:	-10 to + 60°C
Humidity range:	20% RH to 90% RH
Pressure range:	1 bar ± 10%
Linearity deviation:	0 - 10 ppm ± 0.3 ppm 10 – 30 ppm ± 5% relative
Temperature drift: (-10°C + 40°C)	< ± 0.4 ppm or < 20 % of the indication
Long-term drift under normal operating conditions:	Sensitivity: < 20% of measured value/year
Response time:	T50< 51s (R22) T50 <30 sec, (R134a)

Minimum sensitivity threshold	10 ppm
Maximum sensitivity threshold	5000 ppm during 90s without sensitivity loss
Recommended Alarm Threshold	200 ppm
Minimum time to detect the lowest concentration	less than 25s after injection of 500 ppm R134A
Recovery time	less than 160s after injection of 8 min of 1000 ppm R134A

Certification:	Electromagnetic Compatibility EN 50270 In accordance with EN 14624 certification

5. TECHNICAL SPECIFICATIONS - OLCT 10 NO Transmitter

Detection principle:	electrochemical sensor
Range:	0-100 ppm NO
Signal output:	4 – 20 mA
Settings:	local through Zero and Sensitivity potentiometers Position Maintenance 2 mA 4-pin connector for gas measuring and current image (100-ohm shunt)
Power supply:	15 to 30 VDC
Consumption:	maximum 30 mA
Cable length:	according to the controller
Connection:	1 terminal block with 2 input wires, 1 terminal with 2 output wires If cable with other gas signal pair: 1 terminal block with 2 input wires with copy on 1 terminal block with 2 wires 2 cable glands M16: cable diameter 4 to 8 mm
Dimensions:	Width 118 mm, Height 157 mm, Depth 60 mm
Material:	Plastic
Protection:	IP66
Storage:	6 months safe from air 0°C<T<20°C +10%<RH<60%
Estimated lifetime:	> 36 months
Temperature range:	-10 to + 45°C
Humidity range:	15% RH to 90% RH
Pressure range:	1 bar ± 20%
Linearity deviation:	0 - 10 ppm ± 3 ppm 10 - 100 ppm ± 5 % relative
Temperature drift: (-10°C + 40°C)	< ± 10 ppm or < 10% of the indication
Long-term drift under normal operating conditions:	Sensitivity: < 20% of measured value/year
Response time:	T90 < 120 sec
Certification:	Electromagnetic Compatibility EN 50270 Explosive Atmospheres: II 3 G / Ex nA IIC T4

6. TECHNICAL SPECIFICATIONS - OLCT 10 NO2 Transmitter

Detection principle:	electrochemical sensor
Range:	0-30 ppm NO2
Signal output:	4 – 20 mA
Settings:	local through Zero and Sensitivity potentiometers Position Maintenance 2 mA 4-pin connector for gas measuring and current image (100-ohm shunt)
Power supply:	15 to 30 VDC
Consumption:	30 mA max
Cable length:	according to the controller
Connection:	1 terminal block with 2 input wires, 1 terminal block with 2 output wires If cable with other gas signal pair: 1 terminal block 2 input wires with copy on 1 terminal block with 2 wires 2 cable glands M16: cable diameter 4 to 8 mm
Dimensions:	Width 118 mm, Height 157 mm, Depth 60 mm
Material:	Plastic
Protection:	IP66
Storage:	6 months safe from air 0°C<T<20°C +10%<RH<60%
Estimated lifetime:	> 24 months
Temperature range:	-10 to + 50°C
Humidity range:	15% RH to 90% RH
Pressure range:	1 bar ± 20%
Linearity deviation:	0 - 10 ppm ± 0.3 ppm 10 - 30 ppm ± 5 % relative
Temperature drift: (-10°C + 40°C)	< ± 0.4 ppm or < 20% of indication
Long-term drift under normal operating conditions:	Sensitivity: < 20% of measured value/year
Response time:	T90 < 60 sec
Certification:	Electromagnetic Compatibility EN 50270 Explosive Atmospheres: II 3 G / Ex nA IIC T4

VI. DETAIL SPECIFICATIONS FOR USE IN EXPLOSIVE ATMOSPHERES IN ACCORDANCE WITH THE ATEX 94/9/CE EUROPEAN DIRECTIVE

- The OLC 10 sensor complies with the requirements of the ATEX 94/9/CE European Directive regarding explosive atmospheres.

- The site manager where the equipment is installed should take into consideration and comply with the information in the following paragraphs. Refer to the provisions of the ATEX 1999/92/CE European Directive regarding the enhancement of safety and health of the workers exposed to explosive atmosphere risks.

1. Specifications for installation in ATEX Zone 2G

The installation will be performed in accordance with existing standards, in particular EN 60079-14 and EN 60079-17 standards.

The detectors are designed for surface industries Group II, Category (3) G zone 2 for minimum and maximum ambient temperatures from –25°C to + 60°C. They should not be exposed to mechanical vibrations.

The detectors are installed vertically (wall-mounted type) with the cable output downwards. An angle of over 45° from the vertical or a horizontal position (ceiling-mounted type) will result in measurement errors and will require a recalibration of the detector.

2. Metrological specifications for OLC 10 combustible gas detector

The OLC 10 combustible gas detector is compliant with the European standards EN 61779-1 and -4 for methane (calibration gas), butane, propane and hydrogen (gas following response curves), when they are used with SV 4B, MX 15, MX 32, MX 42A, MX 43, MX 48, MX 52 OLDHAM controllers.

Note: the vibration tests based on EN 61779-4 paragraph 4.13 have not been conducted because they do not apply due to the operating conditions of this type of detector.

2.1. *Special precautions*

- Sensors are sensitive to some poisons that may cause their desensitisation: emanation of siliconized vapours with concentrations > 10 ppm, chlorinated species or sulphur with concentrations > 100 ppm

- The lack of oxygen (< 15% O2) or over-oxygenation (> 23% O2) may cause an underestimation or overestimation of the measurement.

2.2. *Reactions to other combustible gases*

It is recommended to calibrate the detector with the gas to be measured. When the user wishes to calibrate it with another gas than that detected and factory programmed, refer to the table below, using the recommended gas and corresponding coefficient.

Table 1: COEFFICIENTS FOR CALIBRATION

	Empirical formula	LEL	LSE	Vapour density	Coefficient CH_4	Coefficient H_2	Coefficient But
Butane	C_4H_{10}	1.5%	8.5 %	2	1.75	1.25	1.0
Hydrogen	H_2	4.0%	75.6%	0.069	1.25	1.0	0.8
Methane	CH_4	5.0%	15.0%	0.55	1.0	0.75	0.55
Propane	C_3H_8	2.0%	9.5	1.6	1.5	1.1	0.85
	Gas recommended for the calibration.						

Example (first line in the table): calibration of a "Acetone" detector with a calibration gas of 1% butane volume

Value to be displayed: $\frac{1\text{ (injected butane)}}{1.5\text{ (LEL butane)}} \times 100 \times 0.95$ (butane/acetone coefficient) = 63% LEL

Note:

- LEL varies based on sources. Those reported here are required by European standard EN 50054.
- The coefficients are accurate at ± 15%

3. MARKING

3.1. *Version OLC 10 / OLC 10 Twin*

OLDHAM Arras
CE
OLC 10 / OLC 10 TWIN

Ex II 3G
Ex nA IIC T6
OSA 05ATEX0116

Caution: electrostatic loads. Rub or wipe with a damp cloth only.
Serial number, year of fabrication.

3.2. *Version OLCT 10*

OLDHAM Arras
CE
OLCT 10

Ex II 3G
Ex nA IIC T4
OSA 05ATEX0116

Caution: electrostatic loads. Rub or wipe with a damp cloth only.
Serial number, year of fabrication.

VII. DECLARATIONS OF CONFORMITY

OLDHAM

DECLARATION DE CONFORMITE CONSTRUCTEUR
Manufacturer Declaration of Conformity

CE

La société **Oldham S.A.S.**, ZI Est 62000 Arras France, atteste que le matériel neuf destiné à être utilisé en Atmosphères Explosives désigné ci-après:
(The company **Oldham S.A.S.**, *ZI Est 62000 Arras France, declares that the following new material intended for use in Explosive Atmospheres :)*

Détecteur de gaz *(gas detector)* type OLC 10 / OLC 10 TWIN / OLCT 10

Est conforme aux exigences de *(complies with the requirements of)*:

Directive Européenne ATEX 94/9/CE du 23/03/94 : Atmosphères Explosives
The European Directive ATEX 94/9/CE of 23/03/94: Explosive Atmospheres

Normes européennes de référence: **EN 60079-0, EN 60079-15**
(Reference European Standards)

N° du dossier de certification OLDHAM: **OSA 05ATEX0116**
(N° of OLDHAM certification file)

Marquage *(Marking)*

a) Détecteurs de gaz combustibles équipés de capteurs catalytiques *(Combustibles gas detectors equipped with catalytic sensors)*
Type OLC 10 / OLC 10 TWIN: **Ex II 3 G / Ex nA IIC T6**
Type OLCT 10: **Ex II 3 G / Ex nA IIC T4**

b) Détecteurs de gaz oxygène et toxiques équipés de capteurs électrochimiques *(Oxygen and toxic gas detectors equipped with electrochemical sensors)*

Type OLCT 10: **Ex II 3 G / Ex nA IIC T4**

Détecteur de gaz *(gas detector)* type OLC 10 / OLC 10 TWIN / OLCT 10 / OLCT 10 SC

Est conforme aux exigences de *(complies with the requirements of)* :

Directive Européenne CEM 2004/108/CE du 15/12/04: Compatibilité Electromagnétique
The European Directive 2004/108/CEE for 15/12/2004: ELECTROMAGNETIC COMPATIBILITY

Normes harmonisées appliquées : **EN 50270:2006 (type 1)**
(Harmonised applied Standards)

Arras, le 19/10/2013

Michel Spellemaeker

Global Director of Product Management

ISO 9001:2008 CERTIFIÉ
ISO 14001:2004 CERTIFIÉ
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DECLARATION DE CONFORMITE CONSTRUCTEUR

CE

The company **Oldham S.A.S.**, ZI Est, 62000 Arras France, declares that following materials intended for halogenated refrigerant fluid detection,

Gas detectors OLCT 10 & CTX 300

comply with the requirements of the European standard EN 14624 :

Performances of portable leak detectors or atmosphere controllers of halogenated refrigerant fluids.

Technical specifications

Equipment category :	Non selective atmosphere controllers
Measuring range :	0-2000 ppm R134a
Minimum sensitivity threshold :	10 ppm R134a
Maximum sensitivity threshold :	5000 ppm R134a during 90s without loss of sensitivity
Minimum alarm threshold :	200 ppm R134a
Minimum time to detect the lowest concentration :	less than 25s after injection of 500 ppm R134a
Recovery time :	less than 160s after injection of 1000 ppm R134a during 8 minutes

Note 1 : For more information about installation, commissioning or safe practices please refer to the user manual of the manufacturer.

Note 2 : Local regulation may apply. For France, please refer to articles R.543-75 to R.543-123 in section 6 of the French Environmental Code (decree #2007-1467 dated from October 12, 2007 and decree #2011-396 dated from 2011, April 13).

Arras, 21/10/2013

Michel Spellemaeker

Global Director of Product Management

ISO 9001:2008 CERTIFIÉ
ISO 14001:2004 CERTIFIÉ

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EN 14624_OLCT 10_ind_b

The Fixed Gas Detection Experts

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